LYME DISEASE

Lyme disease, caused by the spirochete *Borrelia burgdorferi,* is transmitted by the bite of *Ixodes* ticks. The acute phase of the illness is characterized by erythema migrans (EM), a red circular patch that usually appears 3 days to 1 month after the bite of an infected tick, at the site of the bite, and is accompanied by mild systemic symptoms. EM occurs in 60%-80% of the patients. The chronic phase may occur within weeks to months after the initial infection and consists of arthritic, cardiac or neurologic manifestations.

Laboratory Criteria for Confirmation:

- Isolation of *B. burgdorferi* from a clinical specimen, **OR**
- Demonstration of diagnostic IgM or IgG antibodies to *B. burgdorferi* in serum or CSF. A two-step testing approach using a sensitive enzyme immunoassay (EIA) or immunofluorescent assay (IFA) followed by Western Blot is required.

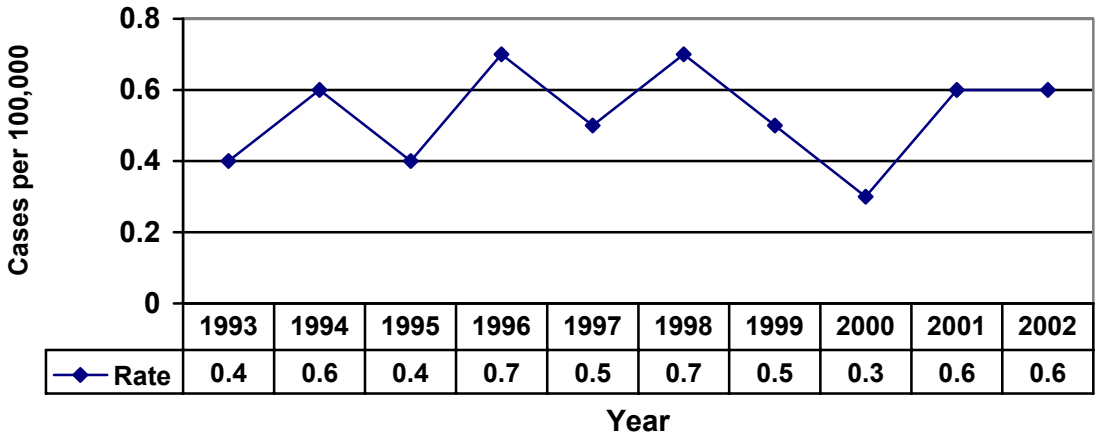
Case Classification

Confirmed: a) A case with erythema migrans or b) a case with at least one late manifestation that is laboratory confirmed.

Comment

See the complete surveillance case definition on the back of the CDC Lyme Disease Report Form in the Appendix.

Lyme Disease Incidence, Kentucky
1993-2002

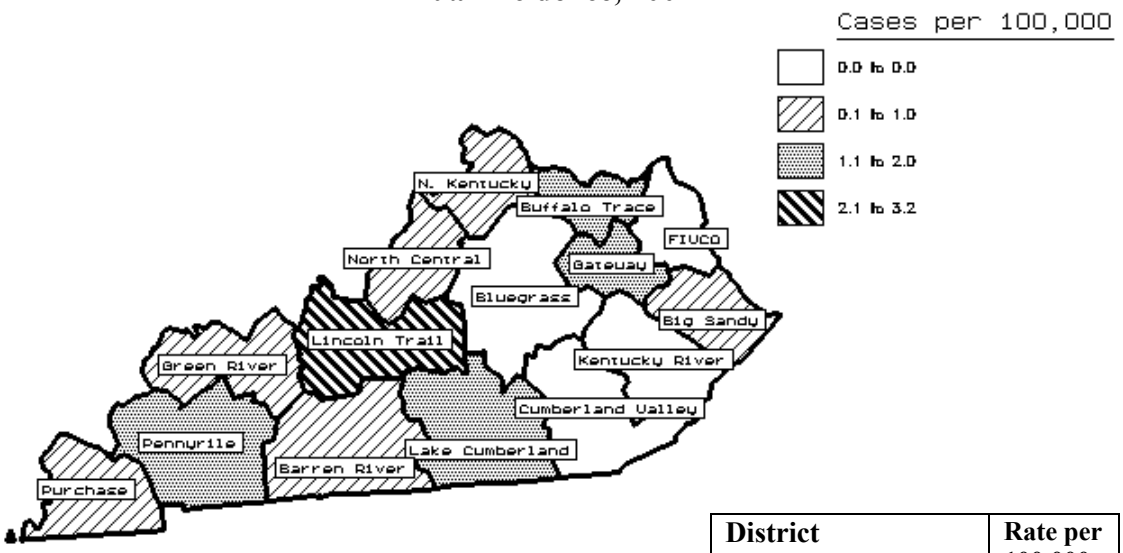


Epidemiology

Kentucky 2002		Rate per 100,000	U. S. Rate (2001) per 100,000
Cases	25	0.6	6.05

Cases by Gender		Rate per 100,000
Female	14	0.7
Male	11	0.6

Lyme Disease by District, Kentucky
Annual Incidence, 2002



Almost one-third of the cases (8) occurred in the Lincoln Trail District, for an incidence rate of 3.2 cases per 100,000 cases. The vector tick, *Ixodes scapularis,* is rarely found in Kentucky, but was documented on several deer harvested from South Central Kentucky in late 2002.

District	Rate per 100,000
Purchase	0.5
Pennyrile	1.4
Green River	0.5
Barren River	0.8
Lincoln Trail	3.2
North Central	0.1
Northern Kentucky	0.5
Buffalo Trace	1.8
Gateway	1.3
Fivco	0.0
Big Sandy	0.6
Kentucky River	0.0
Cumberland Valley	0.0
Lake Cumberland	1.5
Bluegrass	0.0